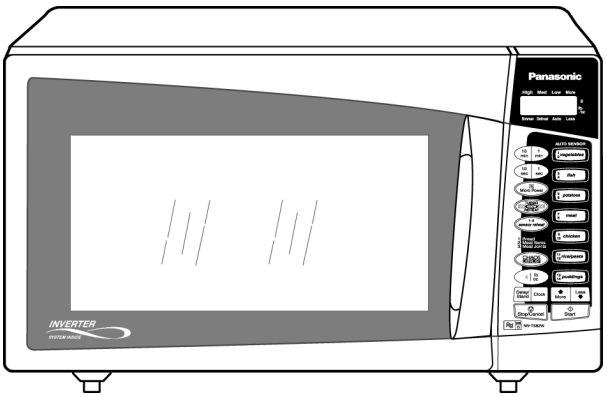
ORDER NO.SIMMC 0301001A1
E1

# Service Manual

## Microwave Oven

Simplified




# NN-T583SF
# NN-T563SF
# NN-T563SAF
# NN-S563 NN-S553
# NN-S543 NN-S533
# NN-S523 NN-S513
# NN-S503

APH(USA)

CPH(CANADA)

**Please file and use this specified manual together with the service manual for Model NN-S560BF/WF(ORDER NO. SIMMC0001002C3).**

Specifications for APH:

| Specifications: / Model: | NN-T583SF | NN-T563SF/SAF | NN-S563BF/WF/MF | NN-S553BF/WF | NN-S543BF/WF/BFW | NN-S533BF/WF | NN-S503BF/WF |
|---|---|---|---|---|---|---|---|
| Power Source: | 120V AC Single Phase, 60Hz | | | | | | |
| Power Requirement: | 1460W | 1460W | 1460W | 1460W | 1460W | 1460W | 1460W |
| Output(IEC705-88): | 1350W | 1300W | 1350W | 1350W | 1300W | 1300W | 1350W |
| Microwave Frequency: | *2450MHz | | | | | | |
| Timer: | *99 min. 99 sec. | | | | | | |
| Outside Dimensions: | *20"(518mm)(W) x 16"(407mm)(D) x 11"(301mm)(H) | | | | | | |
| Oven Cavity Dimensions: | *14 "(375mm)(W) x 15"(386mm)(D) x 8 "(225mm)(H) | | | | | | |
| Weight: | *23lbs. (10.5 kg) | | | | | | |
| PbF | This product with PbF | | | | | | |
| Output power: IEC705-88 Test Procedure | | | | | | | |
| Specifications subject to change without notice. | | | | | | | |

Specifications for CPH:

| Specifications: / Model: | NN-T583SF | NN-S563BF/WF/MF | NN-S533WF | NN-S523WF | NN-S513WF |
|---|---|---|---|---|---|
| Power Source: | 120V AC Single Phase, 60Hz | | | | |
| Power Requirement: | 1460W | 1460W | 1460W | 1460W | 1460W |
| Output(IEC705-88): | 1250W | 1250W | 1200W | 1200W | 1250W |
| Microwave Frequency: | *2450MHz | | | | |
| Timer: | *99 min. 99 sec. | | | | |
| Outside Dimensions: | *20"(518mm)(W) x 16"(407mm)(D) x 11"(301mm)(H) | | | | |
| Oven Cavity Dimensions: | *14"(375mm)(W) x 15"(386mm)(D) x 8"(225mm)(H) | | | | |
| Weight: | *23lbs. (10.5 kg) | | | | |
| PbF | This product with PbF | | | | |
| Output power: IEC705-88 Test Procedure | | | | | |
| Specifications subject to change without notice. | | | | | |

Panasonic®

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## ⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

## WARNING

1. This product should be serviced only by trained, qualified personnel.
2. Though this product has been manufactured in compliance with:
   "Federal Performance Standard 21 CFR Subchapter J"(D.H.H.S): U.S.A. models
   or "Radiation Emitting Devices Act"(Health and Welfare Canada): Canadian models
   it is very important all repairs should be made in accordance with procedures described in this manual to avoid being exposed to excessive microwave radiation.
3. Check for radiation leakage before and after every servicing according to the "procedure for measuring radiation leakage."
4. If the unit cannot be repaired on site, advise the customer not to use until unit is repaired.
5. Any serviceman who learns of any accident pertaining to microwave radiation leakage including the oven operating with open door should immediately notify the appropriate address listed below and Center for Devices and Radiological Health, DHHS.

| | | | |
|---|---|---|---|
| IN U.S.A. (PASC) | Panasonic Services Company<br>50 Meadowland Parkway,<br>Secaucus, New Jersey 07094<br>Attention: Technical Service Division.<br>(201)348-7000 | IN PUERTO RICO (PSC) | PSC<br>San Gabriel Industrial Park<br>65th Infantry Ave. Km.9.5<br>Carolina, Puerto Rico 00985<br>(787)750-4300 |
| | | IN CANADA (PCI) | Panasonic Canada Inc.<br>5770 Ambler Drive, Mississauga,<br>Ontario, L4W2T3<br>(905)624-5010 |

6. There are special components used in the microwave oven which are important for safety. These parts are marked with a ⚠ on the replacement parts list. It is essential that these critical parts should be replaced only with the manufacture's specified parts to prevent microwave leakage, shock, fire, or other hazards. Do not modify the orginal design.

# PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

(A) Do not operate or allow the oven to be operated with the door open.
(B) Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs as necessary:
  (1) Interlock operation
  (2) Proper door closing
  (3) Seal and sealing surfaces (arcing, wear, and other damage)
  (4) Damage to or loosening of hinges and latches.
  (5) Evidence of dropping or abuse
(C) Before turning on microwave power for any service test or inspection within the microwave generating compartments, check the magnetron, waveguide or transmission line, and cavity for proper alignment, integrity and connections.
(D) Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, replaced, or adjusted by procedures described in this manual before the oven is released to the owner.
(E) A microwave leakage check to verify compliance with the Federal Performance Standard should be performed on each oven prior to release to the owner.

## CAUTION

**About lead free solder (PbF)**

**Distinction of PbF PCB:** PCBs (manufactured) using lead free solder will have a PbF stamp on the PCB.

**Caution:**
- Pb free solder has a higher melting point than standard solder; Typically the melting point is 30 - 40˚C higher. Please use a high temperature soldering iron. In case of the soldering iron with temperature control, please set it to 370 ± 10˚C.
- Pb free solder will tend to splash when heated too high (about 600˚C).

**DANGER OF HIGH VOLTAGE AND HIGH TEMPERATURE (HOT/LIVE) OF THE INVERTER POWER SUPPLY (U)**

## INVERTER WARNING

**This Inverter board looks like a regular PCB. However, this PCB drives the magnetron tube with extremely high voltage and high current.** **NEW H.V.**

**IT HAS:**

1. **Very high voltage and high current circuits.**
   **It functions the same as the high voltage transformer and high voltage capacitor in ordinary microwave ovens.**
2. **Aluminum heat sink is energized with very high voltages and high heat energy.**
3. **Very high voltage may remain in circuitry even when oven is off. High voltage may remain in the capacitors on the board.**

**DO NOT:**

* 1. **Do not touch circuitry because it has very hot (high voltage) circuitry. Even when replacing board, extreme care should be taken to avoid possible electric shock hazards. High voltage may remain in circuit.**

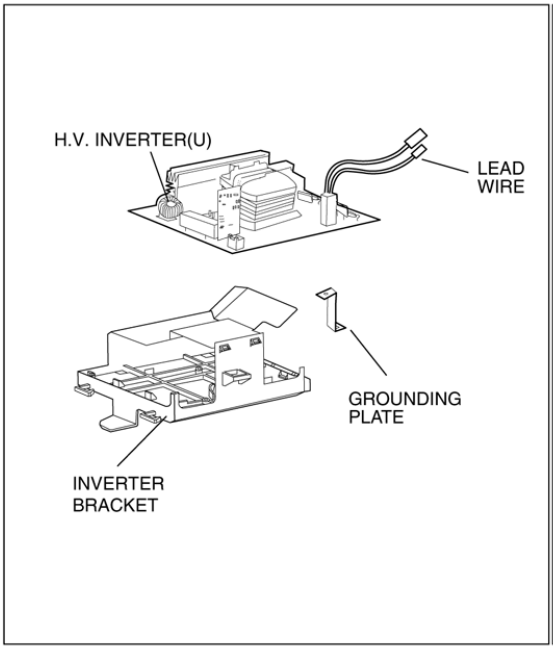
* 2. **Do not touch aluminum heat sink because it is very hot in high voltage and also very hot in high heat energy.**

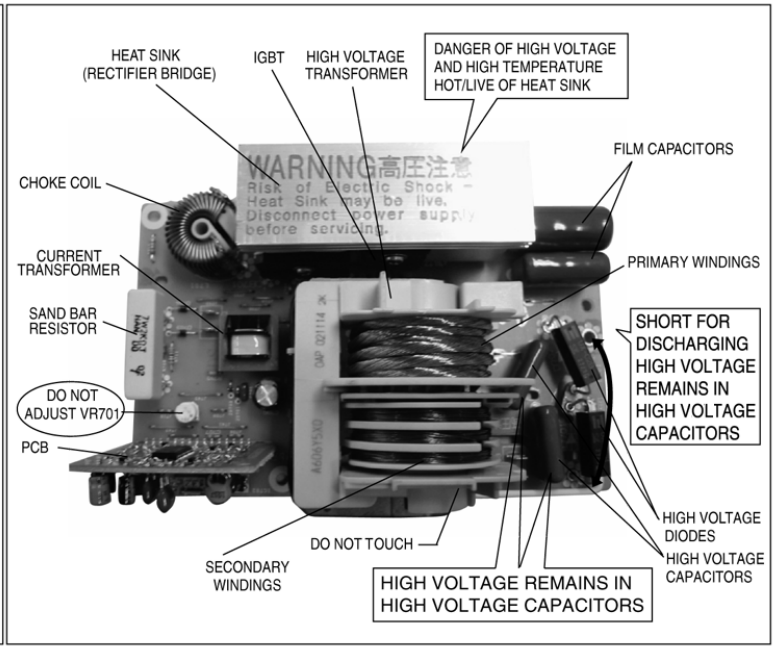
* 3. **Do not try to adjust or tamper with preset volume on the Inverter board because it is very dangerous to adjust without proper test equipment.**

* 4. **Do not test oven while Inverter grounding plate or screws are loose. It is very dangerous to operate H.V. Inverter Circuit (U) with loose mounting screws or if improperly grounded.**

* 5. **For USA only:**
   **Do not try to repair Inverter PCB because it is very dangerous to repair it. Replace as whole High Voltage Inverter Circuit unit and return fully re-packed with original shipping box and shipping materials.**

## INVERTER POWER SUPPLY



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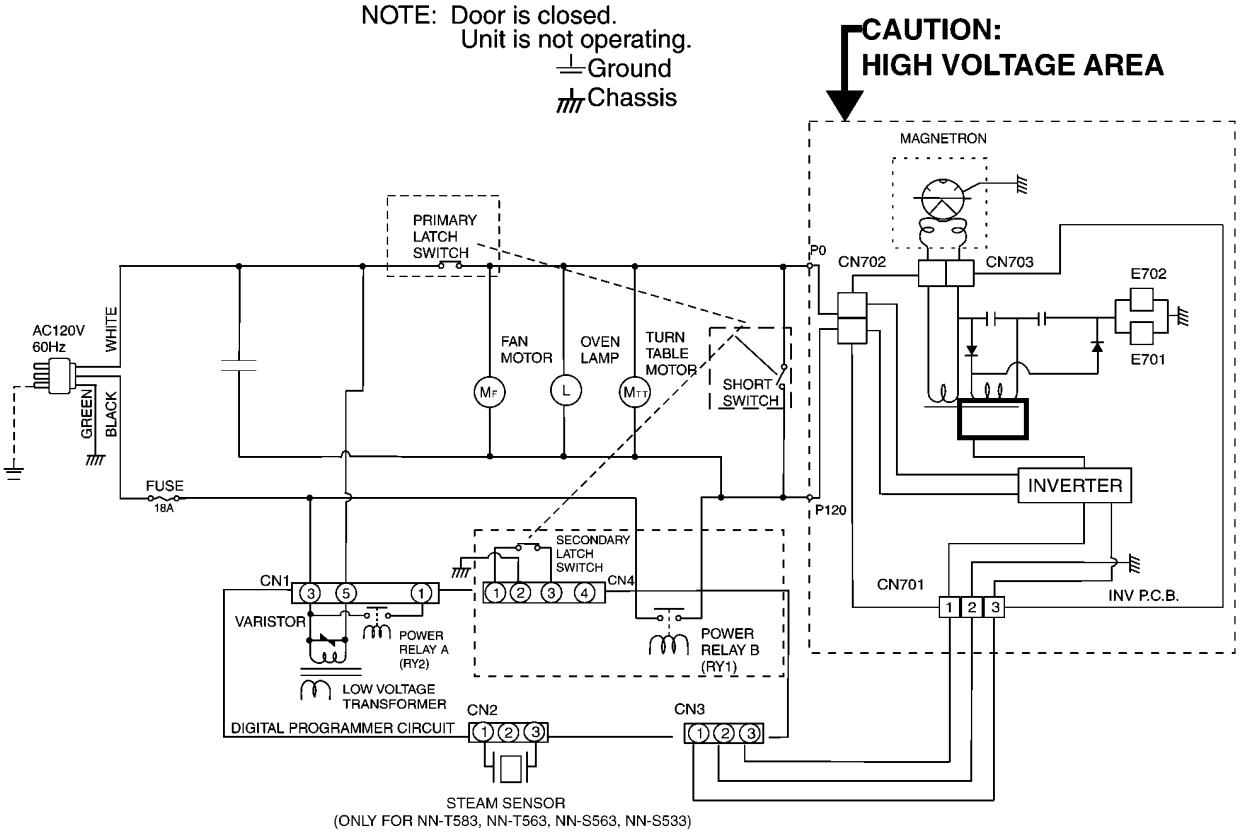
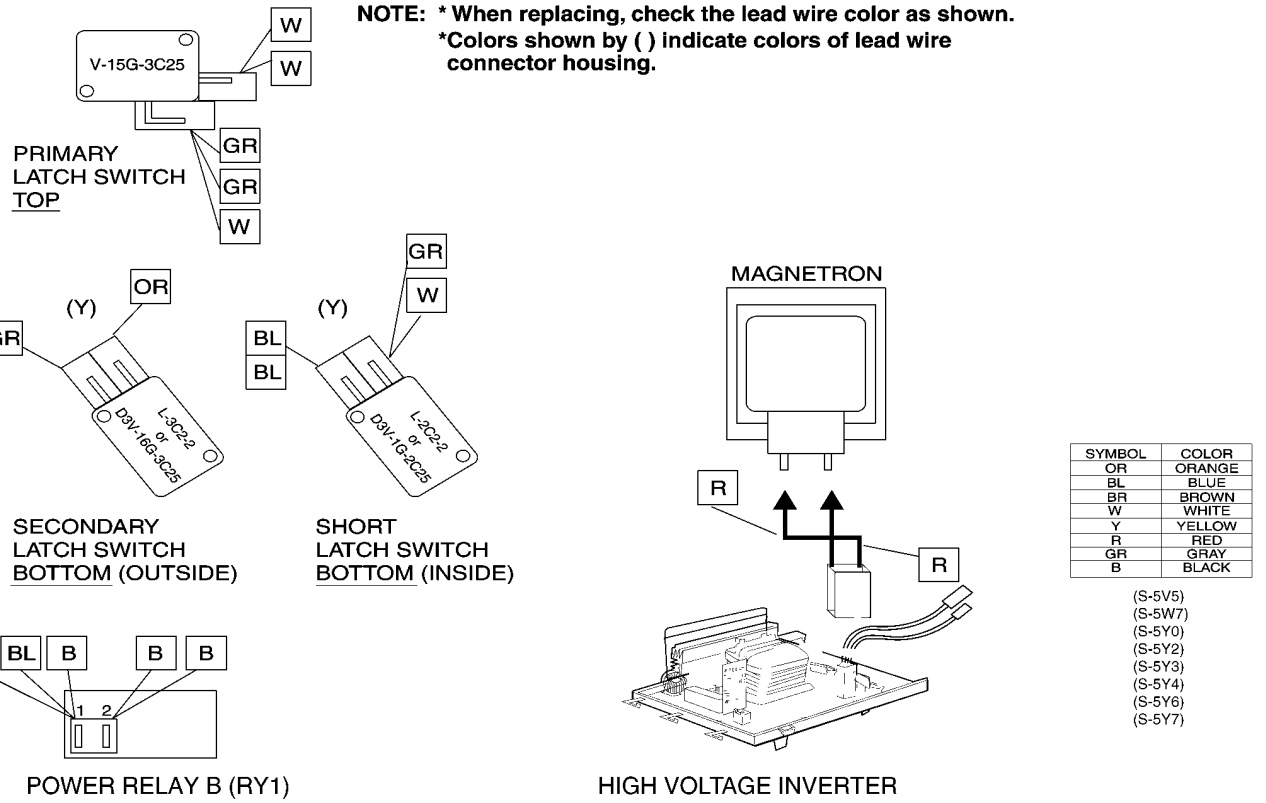
# 1 SCHEMATIC DIAGRAM (APH)




**WIRING DIAGRAM (APH)**

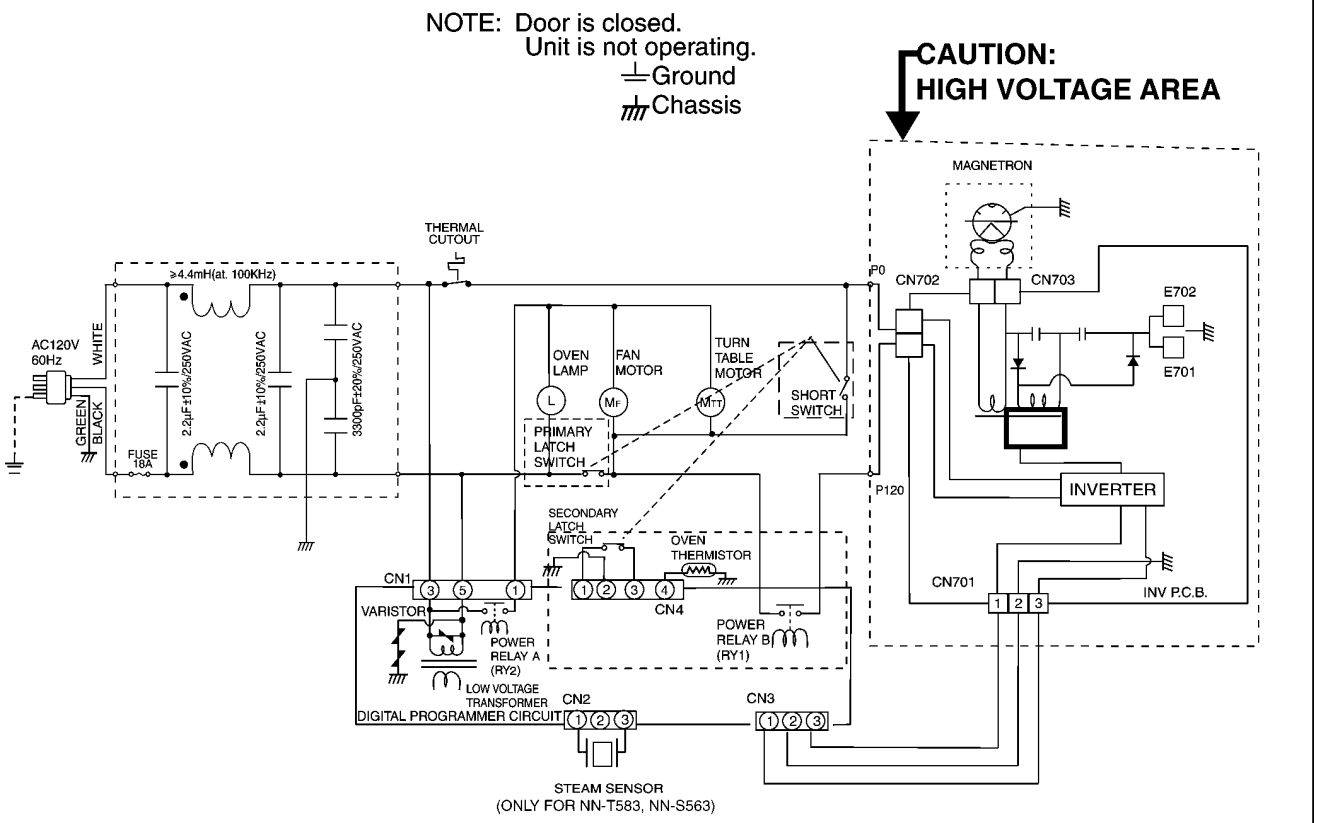
**NOTE: * When replacing, check the lead wire color as shown.**
***Colors shown by ( ) indicate colors of lead wire connector housing.**



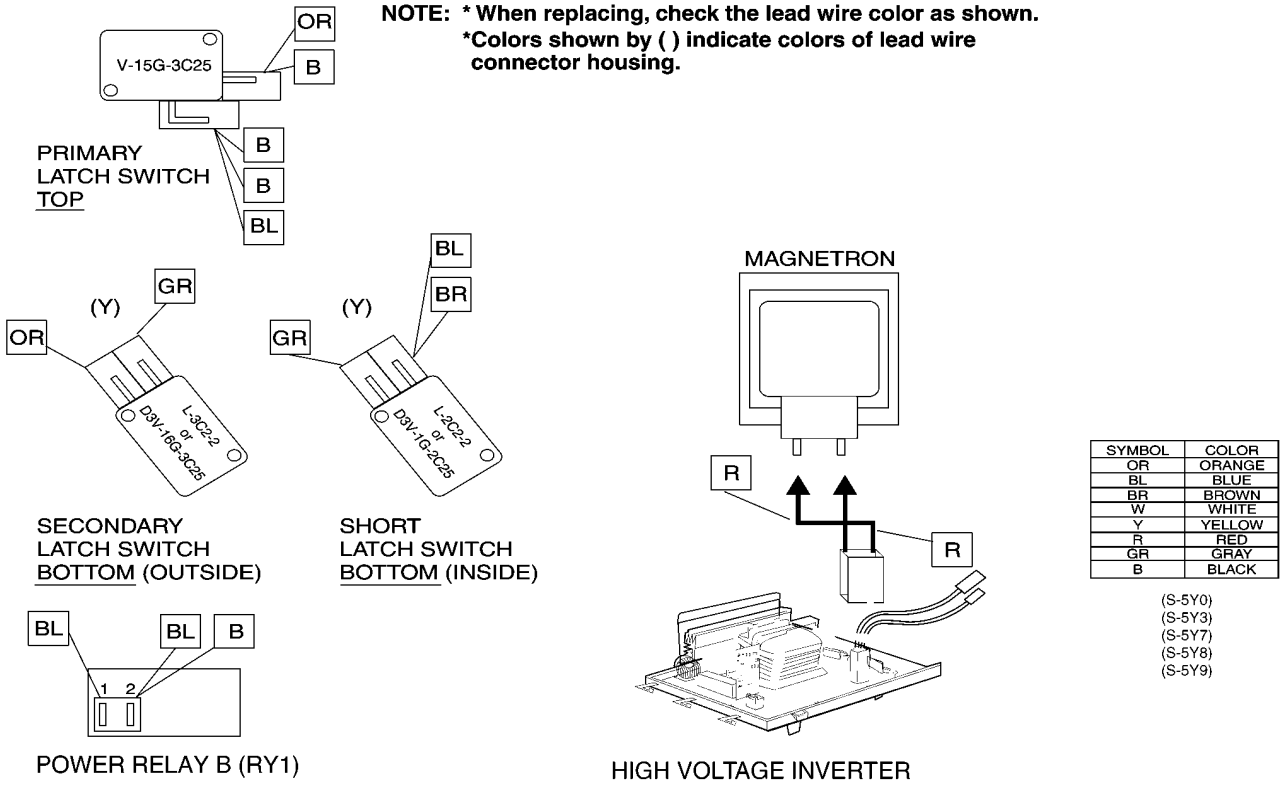

| SYMBOL | COLOR |
|---|---|
| OR | ORANGE |
| BL | BLUE |
| BR | BROWN |
| W | WHITE |
| Y | YELLOW |
| R | RED |
| GR | GRAY |
| B | BLACK |

(S-5V5)
(S-5W7)
(S-5Y0)
(S-5Y2)
(S-5Y3)
(S-5Y4)
(S-5Y6)
(S-5Y7)

# 2 SCHEMATIC DIAGRAM (CPH)




**WIRING DIAGRAM (CPH)**



# 3 MEASUREMENTS AND ADJUSTMENTS

**WARNING**

* For continued protection against radiation hazard, replace only with identical replacement parts (For touch models Part No. ANE6142-1450,Type No. V-15G-3C25 for Primary latch switch; Part No. A61425180AP, Type No. L-3C2-2 for Secondary latch switch and Part No. A61785180AP, Type No. L-2C2-2 for short switch.)
* When the 18 Amp. fuse is blown due to the operation of the short switch, you must replace power relay B. Primary latch switch and the short switch. Then follow the installation procedures below.
* Interlock switch replacement In replacing faulty switches, be sure mounting tabs are not bent, broken or otherwise deficient in their ability to hold the switches.
* Refer to schematic diagram to ensure proper connection.

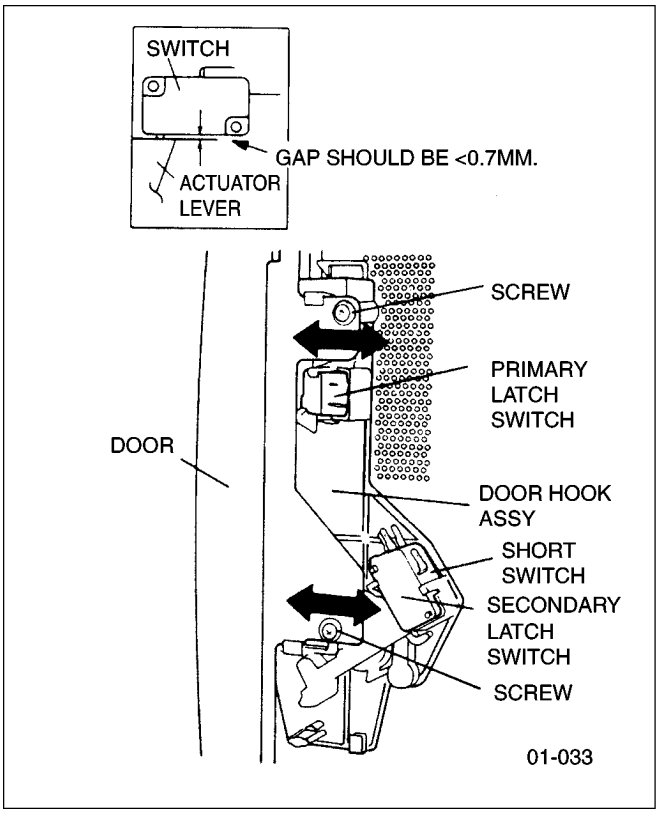
## 3.1. Adjustment of Primary latch switch, Secondary latch switch and Short switch.

1. When mounting Primary latch switch,Secondary latch switch and short switch to door hook assembly, mount the Primary latch switch, the Secondary latch switch and the short switch to the door hook assembly as shown in table.

   **NOTE:**

   **No specific adjustment during installation of Primary latch switch, Secondary latch switch and short switch to the door hook is necessary.**

2. When mounting the door hook assembly to the oven assembly, adjust the door hook assembly by moving it in the direction of arrow in the illustration so that the oven door will not have any play in it. Check for play in the door by pulling the door assembly. Make sure that the latch keys move smoothly after adjustment is completed. Completely tighten the screws holding the door hook assembly to the oven assembly.
3. Reconnect the short switch and check the continuity of the monitor circuit and all latch switches again by following the components test procedures.




## 3.2. Measurement of microwave output

The output power of the magnetron can be determined by performing IEC standard test procedures. However,due to the complexity of IEC test procedures, it is recommended to test the magnetron using the simple method outlined below.

Necessary Equipment:

*1 liter beaker *Glass thermometer
*Wrist watch or stopwatch

**NOTE:**

**Check the line voltage under load.Low voltage will lower the magnetron output. Take the temperature readings and heating time as accurately as possible.**

1. Fill the beaker with exactly one liter of tap water.Stir the water using the thermometer and record the beaker´s temperature. (recorded as T1).
2. Place the beaker on the center of glass cook plate.
   Set the oven for High power and heat it for exactly one minute.
3. Stir the water again and read the temperature of the beaker. (recorded as T2).
4. The normal temperature rise at High power position for each model is as shown in table.

**TABLE (1L-1min.test)**

| RATED OUTPUT | TEMPERATURE RISE |
|---|---|
| 1200W(IEC705-88) | Min. 18.5°F(10.3°C) |
| 1300W(IEC705-88) | Min. 19.8°F(11.1°C) |
| 1400W(IEC705-88) | Min. 21.6°F(12.0°C) |

# 4 PROCEDURE FOR MEASURING MICROWAVE ENERGY LEAKAGE

**WARNING**

Check for radiation leakage after every servicing. Should the leakage be more than 2 mW/cm$^2$ (1mW/cm$^2$ for Canada) inform PASC, PSC, or PCI immediately. After repairing or replacing any radiation safety device, keep a written record for future reference, as required by D.H.H.S. and Health and Welfare Canada regulation. This requirement must be strictly observed. In addition, the leakage reading must be recorded on the service repair ticket while in the customer's home.

**NOTE:**

**The U.S. Government standard is 5 mW/cm$^2$ while in the customer's home. 2mW/cm$^2$ stated here is our own voluntary standard. (1mW/cm$^2$ for Canada)**

## 4.1. Equipment

- Electromagnatic radiation monitor
- Glass thermometer 212°F or 100°C
- 600cc glass beaker

## 4.2. Procedure for measuring radiation leakage

Note before measuring.

- Do not exceed meter full scale deflection. Leakage monitor should initially be set to the highest scale.
- To prevent false readings the test probe should be held by the grip portion of the handle only and moved along the shaded area in Figure no faster than 1 inch/sec (2.5cm/sec).
- Leakage with the outer panel removed ..... less than 5mW/cm$^2$.
- Leakage for a fully assembled oven with door normally closed ..... less than 2mW/cm$^2$ (1mW/cm$^2$ for Canada).
- Leakage for a fully assembled oven [Before the latch switch (primary) is interrupted] while pulling the door ..... less than 2mW/cm$^2$.

1. Pour 275 ± 15cc (9ozs$^s$± 1/2oz) of 20°C ± 5°C (68° ± 9°F) water in a beaker which is graduated to 600cc, and place in the center of the oven.
2. Set the radiation monitor to 2450MHz and use it following the manufacturer´s recommended test procedure to assure correct results.
3. When measuring the leakage, always use the 2 inch (5cm) spacer supplied with the probe.
4. Tap the start pad or set the timer and with the magnetron oscillating, measure the leakage by holding the probe perpendicular to the surface being measured.

### 4.2.1. Measurement with the outer panel removed.

Whenever you replace the magnetron, measure for radiation leakage before the outer panel is installed and after all necessary components are replaced or adjusted. Special care should be taken in measuring around the magnetron.

**WARNING**

Avoid contacting any high voltage parts.

### 4.2.2. Measurements with a fully assembled oven.

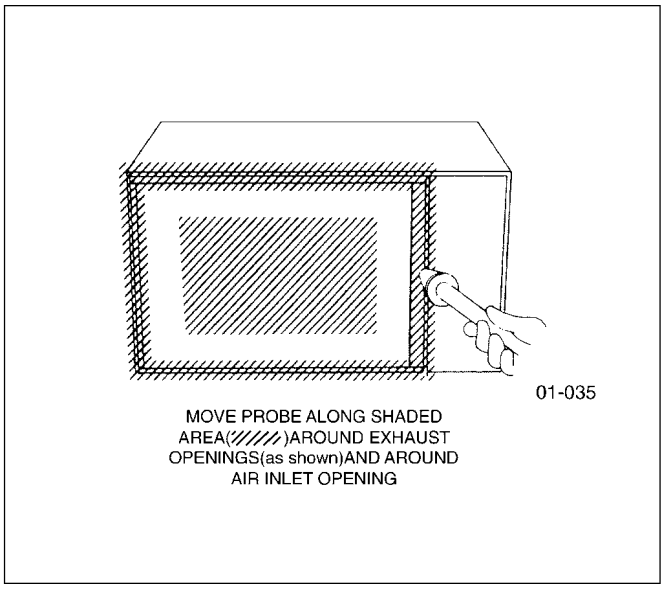
After all components, including outer panel are fully assembled, measure for radiation leakage around the door periphery, the door viewing window, the exhaust opening and air inlet openings.

## 4.3. Record keeping and notification after measurement

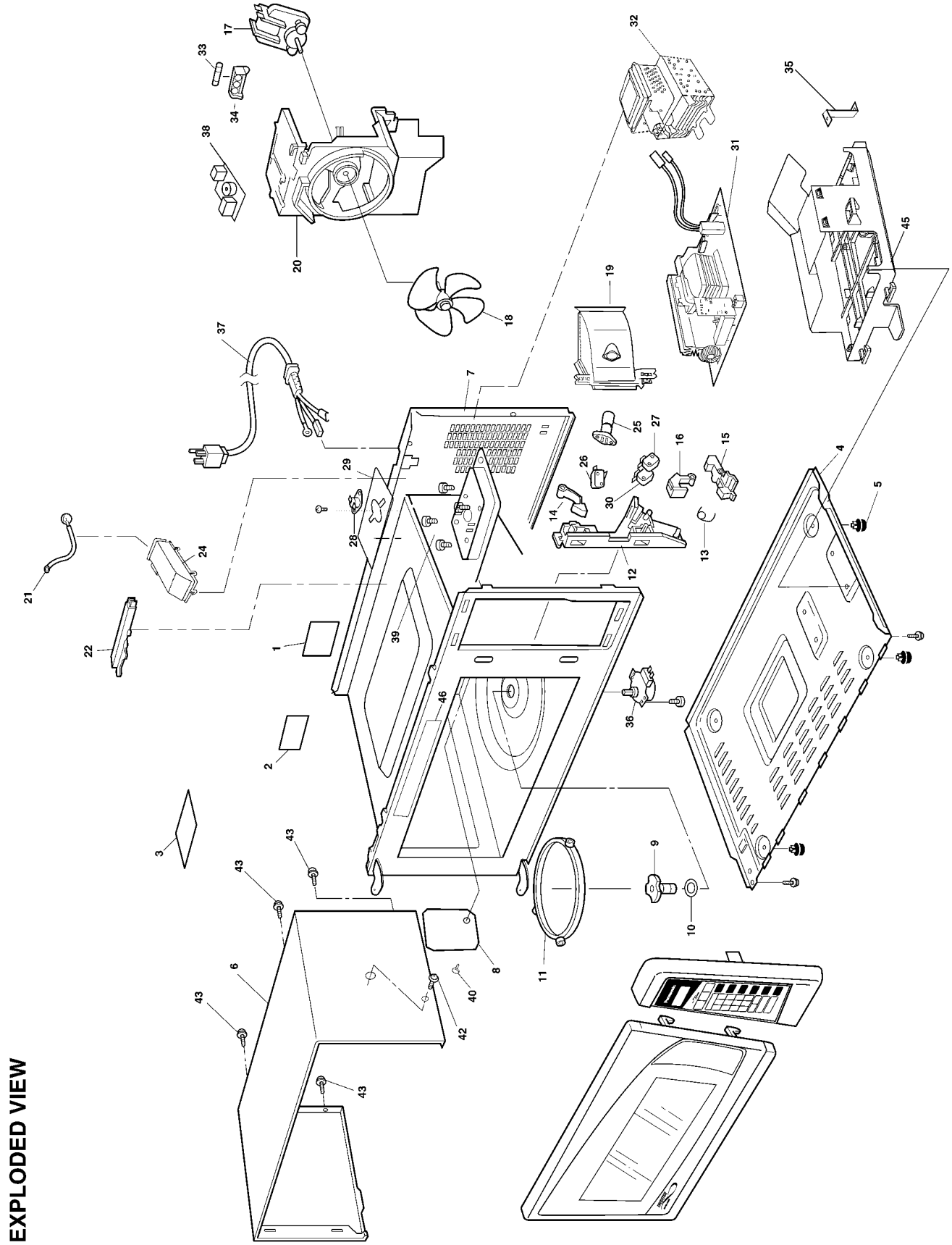
- After any adjustment or repair to a microwave oven, a leakage reading must be taken. Record this leakage reading on the repair ticket even if it is zero.

  A copy of this repair ticket and the microwave leakage reading should be kept by repair facility.
- Should the radiation leakage be more than 2 mW/cm$^2$ (1mW/cm for Canada) after determining that all parts are in good condition, functioning properly, and genuine replacement parts as listed in this manual have been used, immediately notify PASC, PSC or PCI.

## 4.4. At least once a year, have the radiation monitor checked for calibration by its manufacturer.



# 5 EXPLODED VIEW AND PARTS LIST



# 6 PARTS LIST

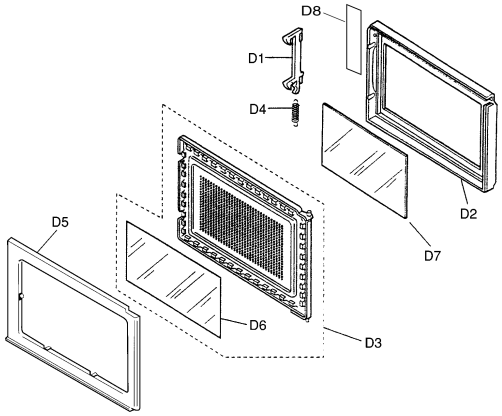
**NOTE:**

1. When ordering replacement part(s), please use part number(s) shown in this part list.
   Do not use description of the part.
2. Important safety notice:
   Components identified by ⚠ mark have special characteristics important for safety.
   When replacing any of these components, use only manufacture's specified parts.

| Ref. No. | | Part No. | Part Name & Description | Pcs/Set | Remarks |
|---|---|---|---|---|---|
| 1 | | F00064W70AP | CAUTION LABEL | 1 | T*** APH |
| 1 | | F00069660AP | CAUTION LABEL | 1 | S*** APH |
| 1 | | F00067600CP | CAUTION LABEL | 1 | CPH |
| 2 | | F00075Y00SAP | NAME PLATE | 1 | T583SF APH |
| 2 | | F00075Y20SAP | NAME PLATE | 1 | T563SF APH |
| 2 | | F00075V50SAP | NAME PLATE | 1 | T563SAF APH |
| 2 | | F00075Y30BAP | NAME PLATE | 1 | S563BF APH |
| 2 | | F00075Y30HAP | NAME PLATE | 1 | S563WF APH |
| 2 | | F00075Y30SAP | NAME PLATE | 1 | S563MF APH |
| 2 | | F00075Y40BAP | NAME PLATE | 1 | S553BF APH |
| 2 | | F00075Y40HAP | NAME PLATE | 1 | S553WF APH |
| 2 | | F00075W70BAP | NAME PLATE | 1 | S543BF APH |
| 2 | | F00075W70HAP | NAME PLATE | 1 | S543WF APH |
| 2 | | F00075W70BAPW | NAME PLATE | 1 | S543BFW APH |
| 2 | | F00075Y70BAP | NAME PLATE | 1 | S533BF APH |
| 2 | | F00075Y70HAP | NAME PLATE | 1 | S533WF APH |
| 2 | | F00075Y60BAP | NAME PLATE | 1 | S503BF APH |
| 2 | | F00075Y60HAP | NAME PLATE | 1 | S503WF APH |
| 3 | | F00339660AP | FUSE LABEL | 1 | |
| 4 | | F10015Y00AP | BASE | 1 | |
| 5 | | F10084T00AP | RUBBER FOOT | 4 | |
| | | | | | |
| 6 | | F110D5Y00SAP | CABINET BODY(U) | 1 | T583SF APH/CPH, T563SF APH |
| 6 | | F110D5Y30SAP | CABINET BODY(U) | 1 | T563SAF APH, S***MF |
| 6 | | F110D5Y30BAP | CABINET BODY(U) | 1 | S***BF |
| 6 | | F110D5Y30HAP | CABINET BODY(U) | 1 | S***WF |
| 7 | ⚠ | F200A5Y30AP | OVEN(U) | 1 | T*** APH/CPH, S563 APH/CPH, S533 APH |
| 7 | ⚠ | F200A5Y40AP | OVEN(U) | 1 | S*** APH/CPH (EXCEPT S563 APH/CPH & S533 APH) |
| 8 | | F20555L00AP | COVER | 1 | |
| 9 | | F21315Y00AP | PULLY SHAFT | 1 | |
| 10 | | F2177-F80 | WASHER | 1 | |
| | | | | | |
| 11 | | F290D9330AP | ROLLER RING(U) | 1 | |
| 12 | ⚠ | F3020-1200 | DOOR HOOK | 1 | T*** APH/CPH |
| 12 | ⚠ | F30208790XN | DOOR HOOK | 1 | S*** APH/CPH |
| 13 | | F3097-5L00 | LATCH SPRING | 1 | S*** APH/CPH |
| 14 | | F3136-1200 | HOOK LEVER A | 1 | T*** APH/CPH |
| 14 | | F31368790XN | HOOK LEVER A | 1 | S*** APH/CPH |
| 15 | | F31374650AP | HOOK LEVER B | 1 | T*** APH/CPH |
| 15 | | F31378790XN | HOOK LEVER B | 1 | S*** APH/CPH |
| | | | | | |
| 16 | | F31384650AP | HOOK LEVER C | 1 | T*** APH/CPH |
| 16 | | F31388790XN | HOOK LEVER C | 1 | S*** APH/CPH |
| 17 | | F400A4T00AP | FAN MOTOR | 1 | AC120V, SINGLE PHASE, 60Hz |
| 18 | | F40084T10AP | FAN BLADE | 1 | |
| 19 | | F40254T00AP | AIR GUIDE A | 1 | |
| 20 | | F41445Y00AP | ORIFICE | 1 | |
| | | | | | |
| 21 | | A607S4T00AP | STEAM SENSOR | 1 | T*** APH/CPH, S563 APH/CPH, S533 APH |
| 22 | | F64508660AP | SENSOR COVER B | 1 | T*** APH/CPH, S563 APH/CPH, S533 APH |
| 24 | | F65434W00AP | SENSOR COVER C | 1 | T*** APH/CPH, S563 APH/CPH, S533 APH |
| 25 | | F612E5Y30AP | INCANDESCENT LAMP(U) | 1 | 125V, 60Hz, 20W |
| | | | | | |
| 26 | ⚠ | F61425U30XN | MICRO SWITCH | 1 | (PRIMARY LATCH SWITCH) (KW3-0D-A (474)) |
| 27 | ⚠ | F61415U30XN | MICRO SWITCH | 1 | (SECONDARY LATCH SWITCH) (KW3-0D-A (471)) |
| 28 | ⚠ | F61455L00CP | THERMAL CUTOUT | 1 | T*** APH/CPH, S*** CPH (105°C) |
| 29 | | F66264T00CP | THERMAL CUTOUT INSULATION BRACKET | 1 | T*** APH/CPH, S*** CPH |
| 30 | ⚠ | F61785U30XN | MICRO SWITCH | 1 | (SHORT SWITCH) (KW3-0T-A (375)) |
| | | | | | |
| 31 | ⚠ | A606Y5X00AP | H.V.INVERTER(U) | 1 | |
| 32 | ⚠ | 2M261-M32F | MAGNETRON | 1 | APH |

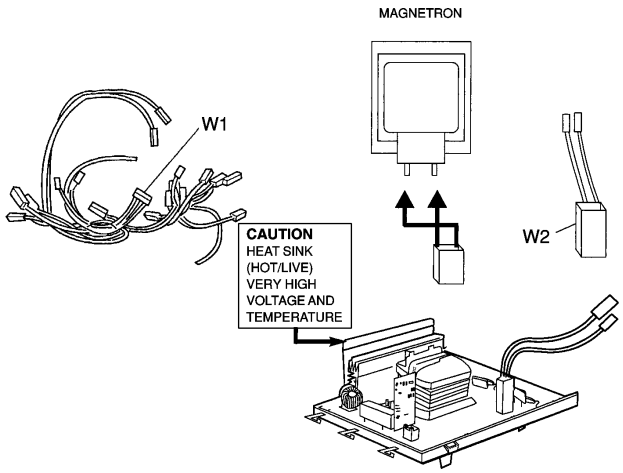
| Ref. No. | | Part No. | Part Name & Description | Pcs/Set | Remarks |
|---|---|---|---|---|---|
| 32 | ⚠ | 2M261-M32G | MAGNETRON | 1 | CPH |
| 33 | ⚠ | B62308250AP | FUSE | 1 | |
| 34 | | B62314000AP | FUSE HOLDER | 1 | APH |
| 35 | | F66625Y00AP | GROUNDING PLATE | 1 | |
| | | | | | |
| 36 | | F63265G60AP | TURNTABLE MOTOR | 1 | |
| 37 | ⚠ | F900C4T60CP | AC CORD W/PLUG | 1 | T*** APH |
| 37 | ⚠ | F900C4T00AP | AC CORD W/PLUG | 1 | S*** APH |
| 37 | ⚠ | F900C5Y30CP | AC CORD W/PLUG | 1 | CPH |
| 38 | | J692Y4T00CP | NOISE FILTER(U) | 1 | CPH |
| 39 | | XTWFA4+12T | SCREW | 4 | FOR MAGNETRON |
| 40 | | XTTFA4+6BN | SCREW | 1 | FOR COVER |
| | | | | | |
| 42 | | XTCA4+12AFK | SCREW | 1 | FOR CABINET BODY SIDE (S***BF) |
| 42 | | XTCA4+12AFW | SCREW | 1 | FOR CABINET BODY SIDE (S***WF) |
| 42 | | XTCA4+12AFS | SCREW | 1 | FOR CABINET BODY SIDE (S***MF) |
| 42 | | XTCA4+12AFM | SCREW | 1 | FOR CABINET BODY SIDE(T*** SF/SAF) |
| 43 | | XTTAFE4T12A0 | SCREW | 4 | FOR CABINET BODY |
| 45 | | F65855X00AP | INVERTER BRACKET | 1 | T*** APH |
| 45 | | F65855W00AP | INVERTER BRACKET | 1 | EXCEPT T*** APH |
| | | | | | |
| 46 | | F03345W20AP | MENU LABEL | 1 | T583 APH |
| 46 | | F03345Y30AP | MENU LABEL | 1 | T563SF APH, T563SAF APH, S563 APH |
| 46 | | F03345Y40AP | MENU LABEL | 1 | S553 APH |
| 46 | | F03345Y70AP | MENU LABEL | 1 | S533 APH |

# 7 DOOR ASSEMBLY



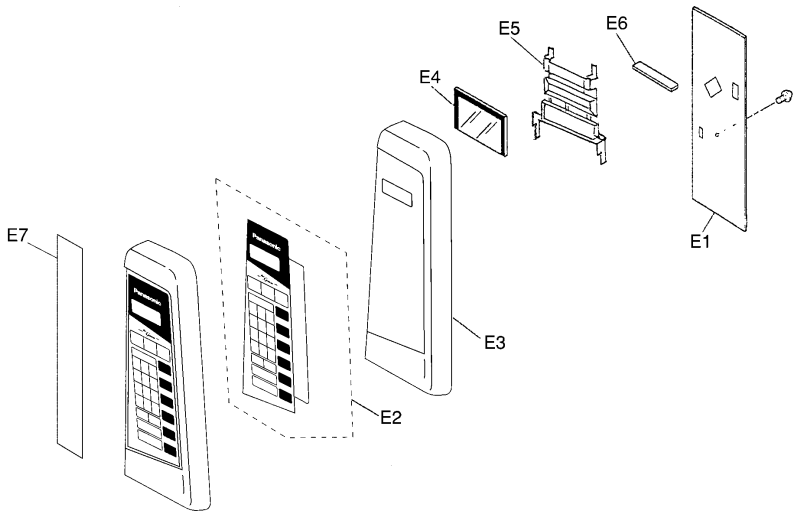

| Ref. No. | | Part No. | Part Name & Description | Pcs/Set | Remarks |
|---|---|---|---|---|---|
| D1 | | F3018-1200 | DOOR KEY A | 1 | T*** APH/CPH |
| D1 | | F30184Y30XN | DOOR KEY A | 1 | S*** APH/CPH |
| D2 | ⚠ | F302A5Y00SAP | DOOR A (U) | 1 | T*** APH/CPH |
| D2 | ⚠ | F30015Y30BAP | DOOR A | 1 | S***BF (EXCEPT S503BF APH) |
| D2 | ⚠ | F30015Y30HAP | DOOR A | 1 | S***WF (EXCEPT S503WF APH) |
| D2 | ⚠ | F30015Y30SAP | DOOR A | 1 | S***MF |
| D2 | ⚠ | F30015A00BAP | DOOR A | 1 | S503BF APH |
| D2 | ⚠ | F30014T00HAP | DOOR A | 1 | S503WF APH |
| D3 | ⚠ | F302K5L00AP | DOOR E (U) | 1 | |
| D4 | | F30215G10XN | DOOR KEY SPRING | 1 | |
| D5 | ⚠ | F30854T00AP | DOOR C | 1 | |
| | | | | | |
| D6 | ⚠ | F31454T00AP | DOOR SCREEN A | 1 | |
| D7 | | F31465Y00SAP | DOOR SCREEN B | 1 | T583SF APH/CPH |
| D7 | | F31465Y20BAP | DOOR SCREEN B | 1 | T563SF APH, T563SAF APH |
| D7 | | F31465Y30BAP | DOOR SCREEN B | 1 | S***BF/MF (EXCEPT S503BF APH) |
| D7 | | F31465Y30HAP | DOOR SCREEN B | 1 | S***WF (EXCEPT S503WF APH) |
| D7 | | F31464T00BAP | DOOR SCREEN B | 1 | S503BF APH |
| D7 | | F31464T00HAP | DOOR SCREEN B | 1 | S503WF APH |
| D8 | | F02459660AP | DHHS LABEL | 1 | T*** APH, S503 APH |
| D8 | | F04114180CP | DHHS LABEL | 1 | T*** CPH |

# 8 WIRING MATERIALS



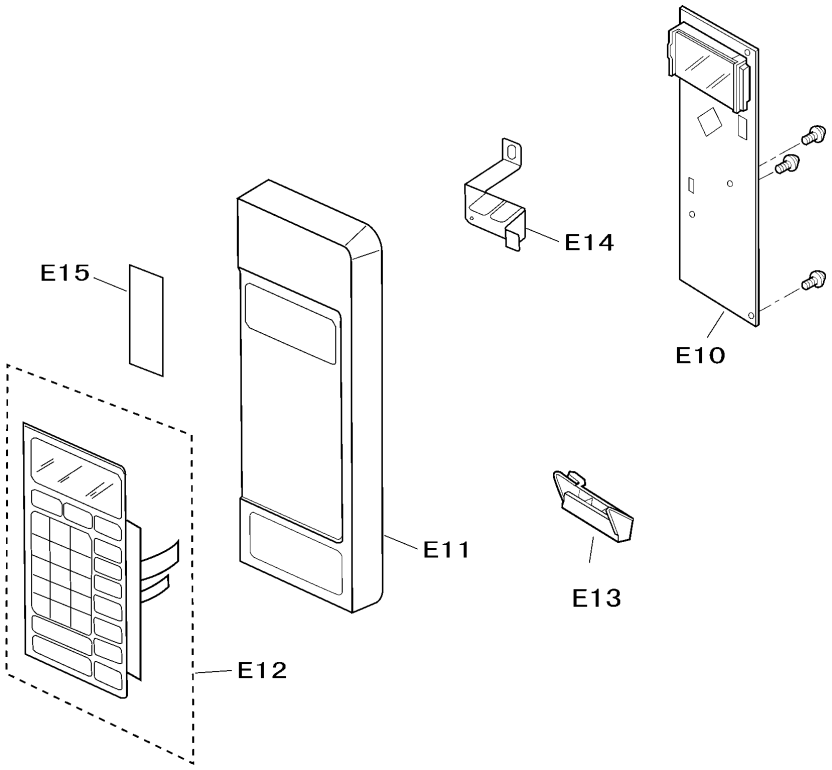

| Ref. No. | | Part No. | Part Name & Description | Pcs/Set | Remarks |
|---|---|---|---|---|---|
| W1 | | F030A5Y30AP | LEAD WIRE HARNESS | 1 | APH |
| W1 | | F030A5Y30CP | LEAD WIRE HARNESS | 1 | CPH |
| W2 | | F030E5L00AP | H.V.LEAD WIRE | 1 | APH |
| W2 | | F030E4T00CP | H.V.LEAD WIRE | 1 | CPH |

# 9 ESCUTCHEON BASE ASSEMBLY (NN-S*** APH/CPH)



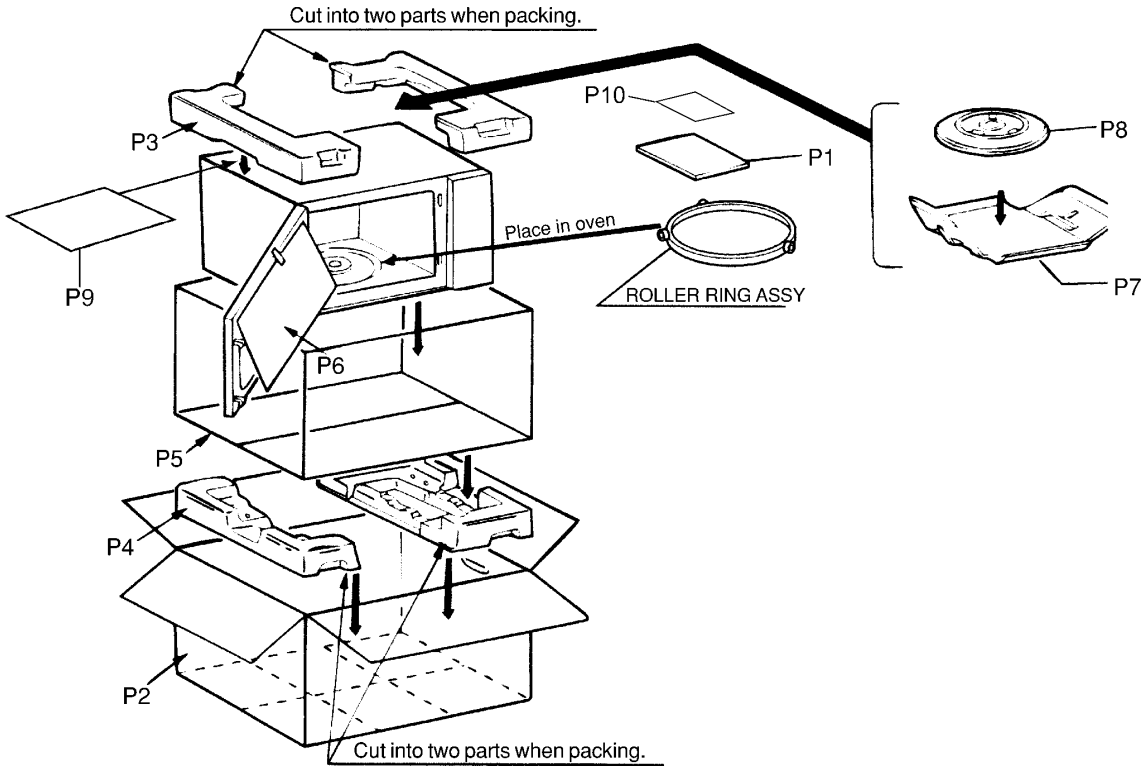

| Ref. No. | | Part No. | Part Name & Description | Pcs/Set | Remarks |
|---|---|---|---|---|---|
| E1 | | F603L5Y30AP | D.P.CIRCUIT | 1 | S563BF/WF/MF APH |
| E1 | | F603L5Y40AP | D.P.CIRCUIT | 1 | S553BF/WF APH |
| E1 | | F603L5W70AP | D.P.CIRCUIT | 1 | S543BF/WF APH, S543BFW APH |
| E1 | | F603L5Y70AP | D.P.CIRCUIT | 1 | S533BF/WF APH |
| E1 | | F603L5Y60AP | D.P.CIRCUIT | 1 | S503BF/WF APH |
| E1 | | F603L5Y30CP | D.P.CIRCUIT | 1 | S563BF/WF/MF CPH |
| E1 | | F603L5Y70CP | D.P.CIRCUIT | 1 | S533WF CPH |
| E1 | | F603L5Y80CP | D.P.CIRCUIT | 1 | S523WF CPH |
| E1 | | F603L5Y90CP | D.P.CIRCUIT | 1 | S513WF CPH |
| E2 | | F630Y5Y30BAP | MEMBRANE SWITCH (U) | 1 | S563BF APH |
| E2 | | F630Y5Y30HAP | MEMBRANE SWITCH (U) | 1 | S563WF APH |
| E2 | | F630Y5Y30SAP | MEMBRANE SWITCH (U) | 1 | S563MF APH |
| E2 | | F630Y5Y40BAP | MEMBRANE SWITCH (U) | 1 | S553BF APH |
| E2 | | F630Y5Y40HAP | MEMBRANE SWITCH (U) | 1 | S553WF APH |
| E2 | | F630Y5W70BAP | MEMBRANE SWITCH (U) | 1 | S543BF APH, S543BFW APH |
| E2 | | F630Y5W70HAP | MEMBRANE SWITCH (U) | 1 | S543WF APH |
| E2 | | F630Y5Y70BAP | MEMBRANE SWITCH (U) | 1 | S533BF APH |
| E2 | | F630Y5Y70HAP | MEMBRANE SWITCH (U) | 1 | S533WF APH |
| E2 | | F630Y5Y60BAP | MEMBRANE SWITCH (U) | 1 | S503BF APH |
| E2 | | F630Y5Y60HAP | MEMBRANE SWITCH (U) | 1 | S503WF APH |
| E2 | | F630Y5Y30BCP | MEMBRANE SWITCH (U) | 1 | S563BF CPH |
| E2 | | F630Y5Y30HCP | MEMBRANE SWITCH (U) | 1 | S563WF CPH |
| E2 | | F630Y5Y30SCP | MEMBRANE SWITCH (U) | 1 | S563MF CPH |
| E2 | | F630Y5Y70HCP | MEMBRANE SWITCH (U) | 1 | S533WF CPH |
| E2 | | F630Y5Y80HCP | MEMBRANE SWITCH (U) | 1 | S523WF CPH |
| E2 | | F630Y5Y90HCP | MEMBRANE SWITCH (U) | 1 | S513WF CPH |
| E3 | | F80345L00BAP | ESCUTCHEON BASE | 1 | S***BF (EXCEPT S533BF APH & S503BF APH) |
| E3 | | F80345L00HAP | ESCUTCHEON BASE | 1 | S***WF (EXCEPT S533WF APH & S503WF APH) |
| E3 | | F80345L70SAP | ESCUTCHEON BASE | 1 | S***MF |
| E3 | | F80345Y30BAP | ESCUTCHEON BASE | 1 | S533BF APH |
| E3 | | F80345Y30HAP | ESCUTCHEON BASE | 1 | S533WF APH |
| E3 | | F80344T00BAP | ESCUTCHEON BASE | 1 | S503BF APH |
| E3 | | F80344T00HAP | ESCUTCHEON BASE | 1 | S503WF APH |
| E4 | | AEDDHJ5G60XN | DISPLAY | 1 | |
| E5 | | F66175L00AP | DISPLAY TUBE COVER | 1 | EXCEPT S503BF/WF APH |
| E5 | | F66174T00AP | DISPLAY TUBE COVER | 1 | S503BF/WF APH |
| | | | | | |
| E6 | | F67004T00AP | RUBBER CONNECTOR | 1 | |
| E7 | | F00075Y30BCP | NAME PLATE | 1 | S563BF CPH |
| E7 | | F00075Y30HCP | NAME PLATE | 1 | S563WF CPH |
| E7 | | F00075Y30SCP | NAME PLATE | 1 | S563MF CPH |
| E7 | | F00075Y70HCP | NAME PLATE | 1 | S533WF CPH |
| E7 | | F00075Y80HCP | NAME PLATE | 1 | S523WF CPH |
| E7 | | F00075Y90HCP | NAME PLATE | 1 | S513WF CPH |

# 10 ESCUTCHEON BASE ASSEMBLY (NN-T*** APH/CPH)




| Ref. No. | | Part No. | Part Name & Description | Pcs/Set | Remarks |
|---|---|---|---|---|---|
| E10 | | F603L5Y00AP | D.P.CIRCUIT | 1 | T583SF APH |
| E10 | | F603L5Y20AP | D.P.CIRCUIT | 1 | T563SF APH, T563SAF APH |
| E10 | | F603L5Y00CP | D.P.CIRCUIT | 1 | T583SF CPH |
| E11 | | F800L5Y00BAP | CONTROL PANEL (AU) | 1 | T*** APH/CPH |
| E12 | | F630Y5Y00SAP | MEMBRANE SWITCH (U) | 1 | T583SF APH |
| E12 | | F630Y5Y20SAP | MEMBRANE SWITCH (U) | 1 | T563SF APH, T563SAF APH |
| E12 | | F630Y5Y00SCP | MEMBRANE SWITCH (U) | 1 | T583SF CPH |
| E13 | | F82565Y00AP | DOOR OPENING LEVEL | 1 | T*** APH/CPH |
| E14 | | F90095X00AP | BACK PANEL | 1 | T*** APH/CPH |
| E15 | | F00075Y00SCP | NAME PLATE | 1 | T583SF CPH |

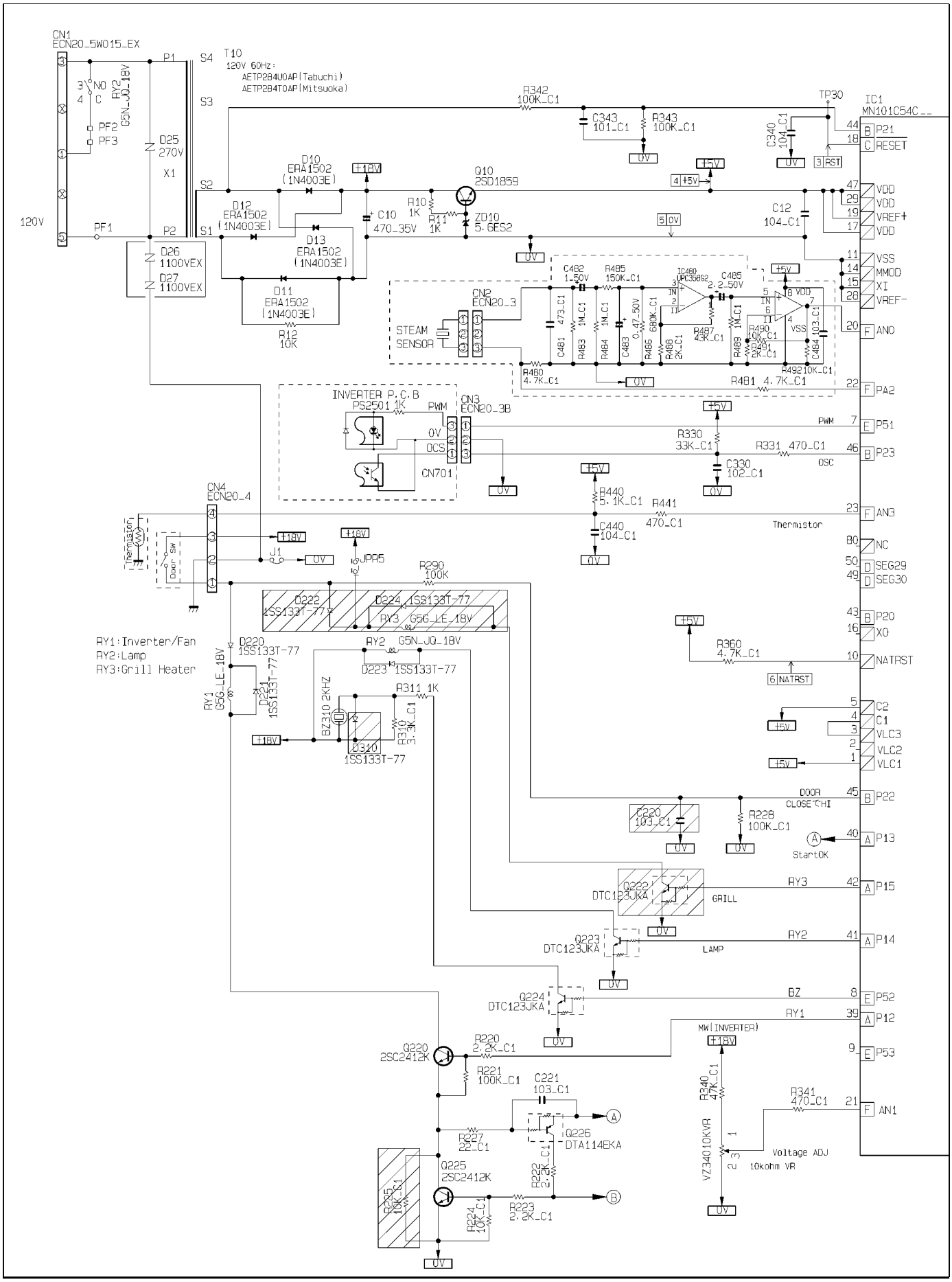
# 11 PACKING AND ACCESORIES

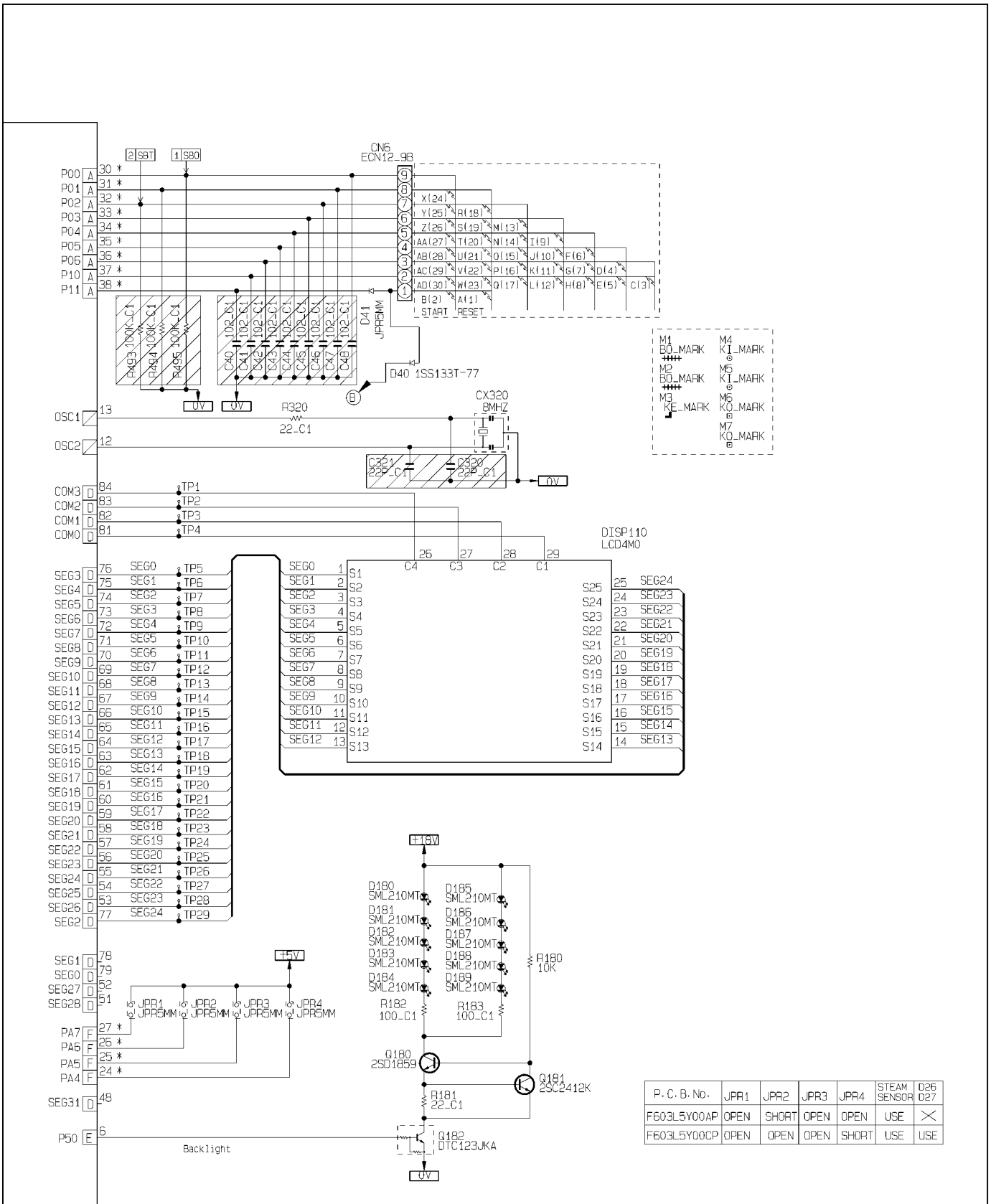



| Ref. No. | | Part No. | Part Name & Description | Pcs/Set | Remarks |
|---|---|---|---|---|---|
| P1 | | F00035X20AP | INSTRUCTION MANUAL | 1 | T583SF APH |
| P1 | | F00035Y30AP | INSTRUCTION MANUAL | 1 | T563SF APH, T563SAF APH, S563BF/WF/MF APH |
| P1 | | F00035Y40AP | INSTRUCTION MANUAL | 1 | S553BF/WF APH, S503BF/WF APH |
| P1 | | F00035W70AP | INSTRUCTION MANUAL | 1 | S543BF/WF APH, S543BFW APH |
| P1 | | F00035Y70AP | INSTRUCTION MANUAL | 1 | S533BF/WF APH |
| P1 | | F00035Y00CP | INSTRUCTION MANUAL | 1 | T583SF CPH |
| P1 | | F00035Y30CP | INSTRUCTION MANUAL | 1 | S563BF/WF/MF CPH |
| P1 | | F00035Y70CP | INSTRUCTION MANUAL | 1 | S533WF CPH, S523WF CPH, S513WF CPH |
| P2 | | F01025Y00SAP | PACKING CASE, PAPER | 1 | T583SF APH |
| P2 | | F01025Y20SAP | PACKING CASE, PAPER | 1 | T563SF APH |
| P2 | | F01025V50SAP | PACKING CASE, PAPER | 1 | T563SAF APH |
| P2 | | F01025Y30BAP | PACKING CASE, PAPER | 1 | S563BF APH |
| P2 | | F01025Y30HAP | PACKING CASE, PAPER | 1 | S563WF APH |
| P2 | | F01025Y30SAP | PACKING CASE, PAPER | 1 | S563MF APH |
| P2 | | F01025Y40BAP | PACKING CASE, PAPER | 1 | S553BF APH |
| P2 | | F01025Y40HAP | PACKING CASE, PAPER | 1 | S553WF APH |
| P2 | | F01025W70BAP | PACKING CASE, PAPER | 1 | S543BF APH |
| P2 | | F01025W70HAP | PACKING CASE, PAPER | 1 | S543WF APH |
| P2 | | F01025W70BAPW | PACKING CASE, PAPER | 1 | S543BFW APH |
| P2 | | F01025Y70BAP | PACKING CASE, PAPER | 1 | S533BF APH |
| P2 | | F01025Y70HAP | PACKING CASE, PAPER | 1 | S533WF APH |
| P2 | | F01025Y60BAP | PACKING CASE, PAPER | 1 | S503BF APH |
| P2 | | F01025Y60HAP | PACKING CASE, PAPER | 1 | S503WF APH |
| P2 | | F01025Y00SCP | PACKING CASE, PAPER | 1 | T583SF CPH |
| P2 | | F01025Y30BCP | PACKING CASE, PAPER | 1 | S563BF CPH |
| P2 | | F01025Y30HCP | PACKING CASE, PAPER | 1 | S563WF CPH |
| P2 | | F01025Y30SCP | PACKING CASE, PAPER | 1 | S563MF CPH |
| P2 | | F01025Y70HCP | PACKING CASE, PAPER | 1 | S533WF CPH |
| P2 | | F01025Y80HCP | PACKING CASE, PAPER | 1 | S523WF CPH |
| P2 | | F01025Y90HCP | PACKING CASE, PAPER | 1 | S513WF CPH |
| P3 | | F01045T20RP | UPPER FILLER | 1 | |
| P4 | | F01055L00AP | LOWER FILLER | 1 | |
| P5 | | F01068100XN | P.E.BAG | 1 | |
| | | | | | |
| P6 | | F01078100XN | DOOR SHEET | 1 | |
| P7 | | F01085T20RP | TRAY PACKING | 1 | |
| P8 | | F06014T00AP | COOKING TRAY | 1 | |
| P9 | | F01924T00AP | SHEET | 1 | T***SF, T***SAF, S***BF, S***MF |
| P10 | | F00065G40AP | CAUTION LABEL | 1 | |

# 12 DIGITAL PROGRAMMER CIRCUIT (NN-T583SF APH/CPH)

SCHEMATIC DIAGRAM

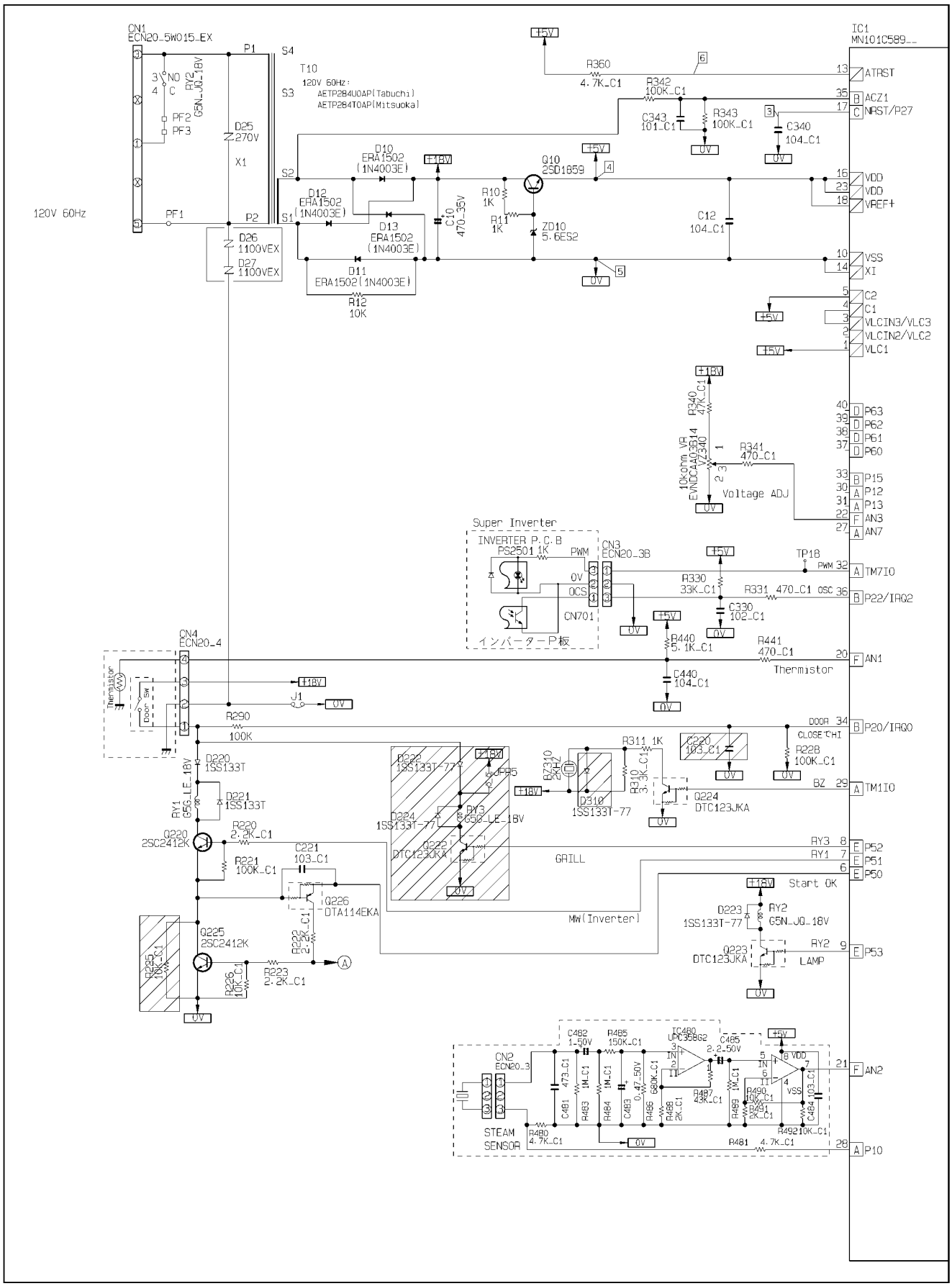


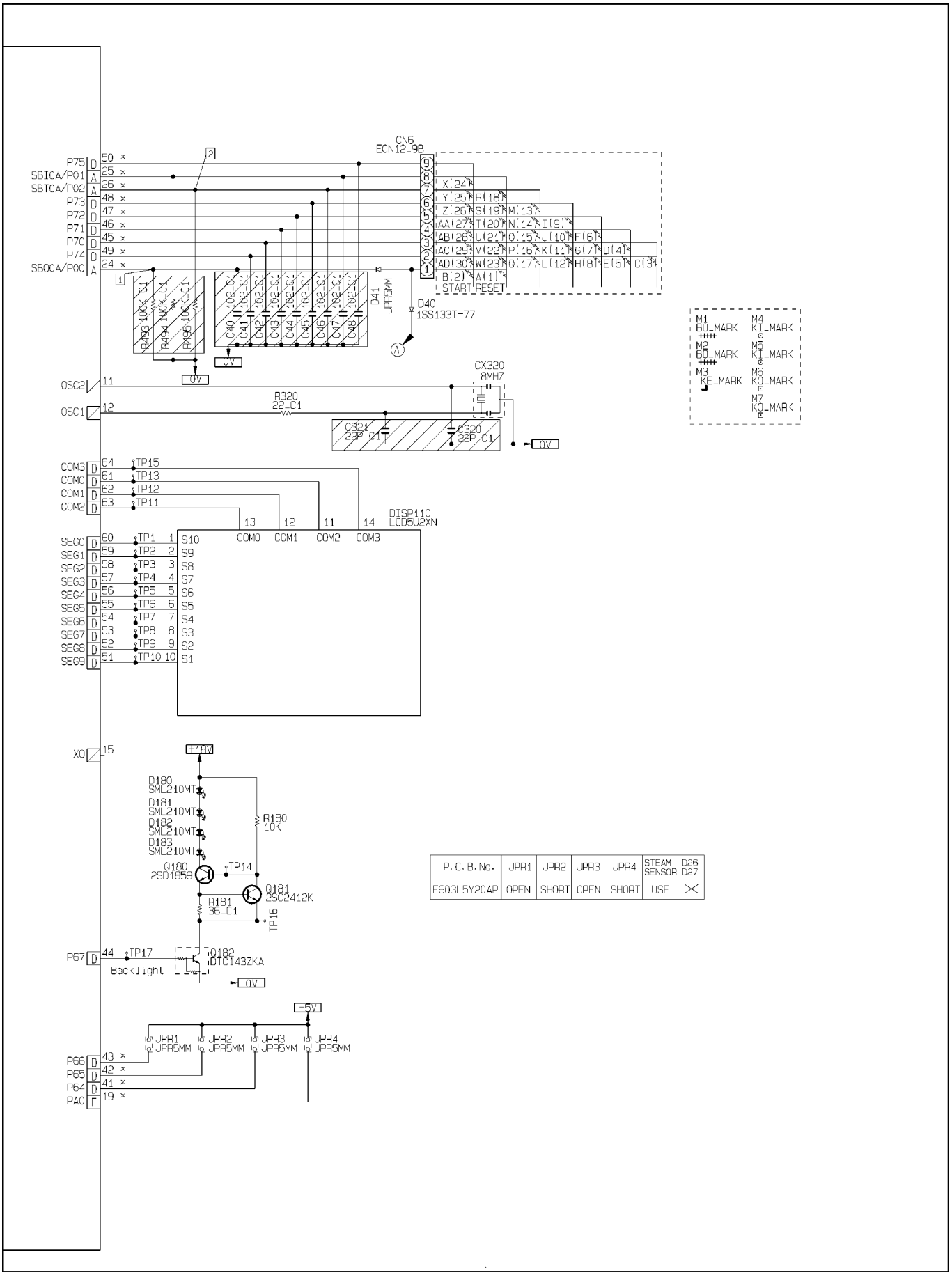



| P. C. B. No. | JPR1 | JPR2 | JPR3 | JPR4 | STEAM SENSOR | D26 D27 |
|---|---|---|---|---|---|---|
| F603L5Y00AP | OPEN | SHORT | OPEN | OPEN | USE | × |
| F603L5Y00CP | OPEN | OPEN | OPEN | SHORT | USE | USE |

# 13 DIGITAL PROGRAMMER CIRCUIT (NN-T563SF APH, NN-T563SAF APH)

SCHEMATIC DIAGRAM

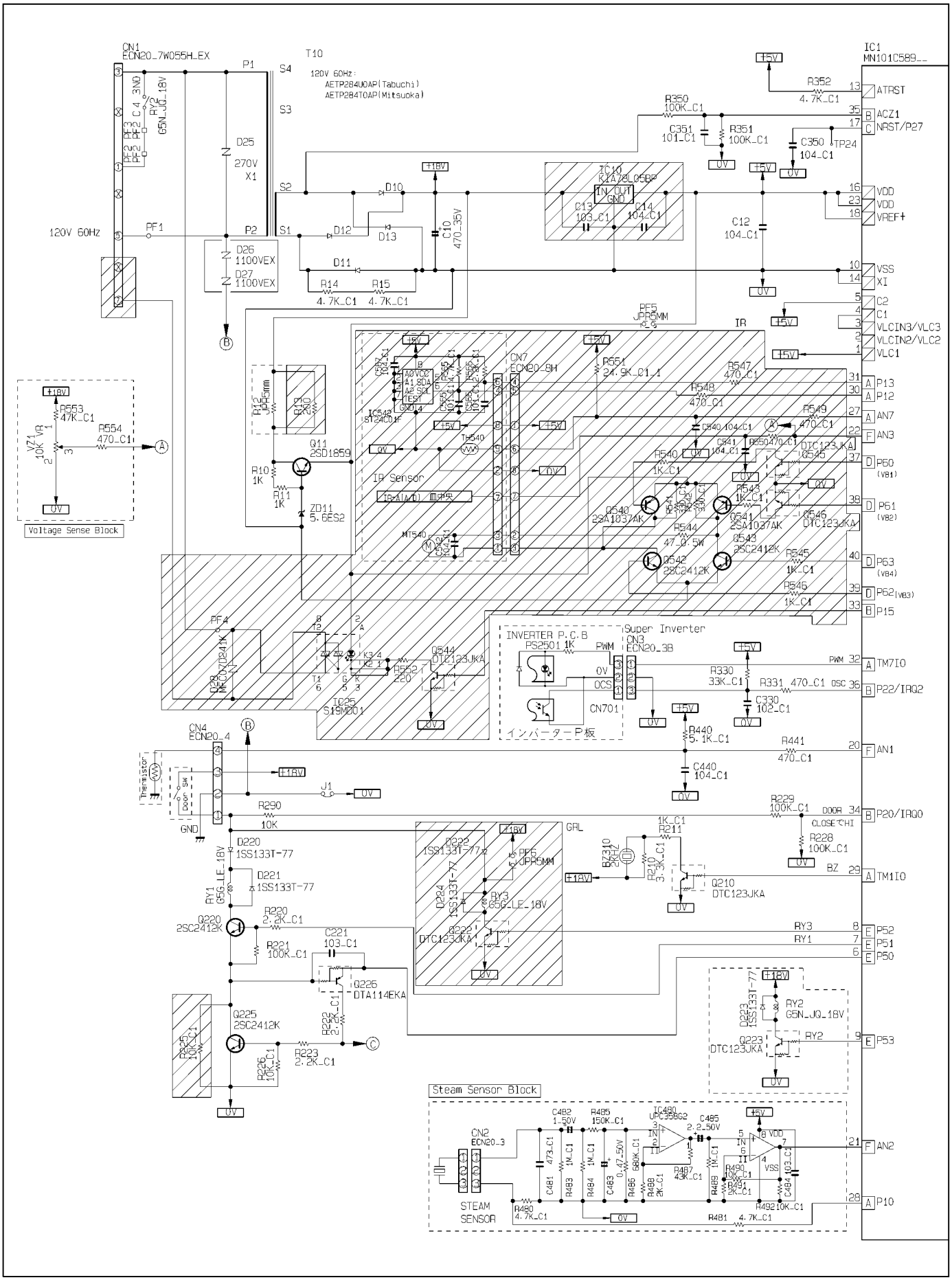


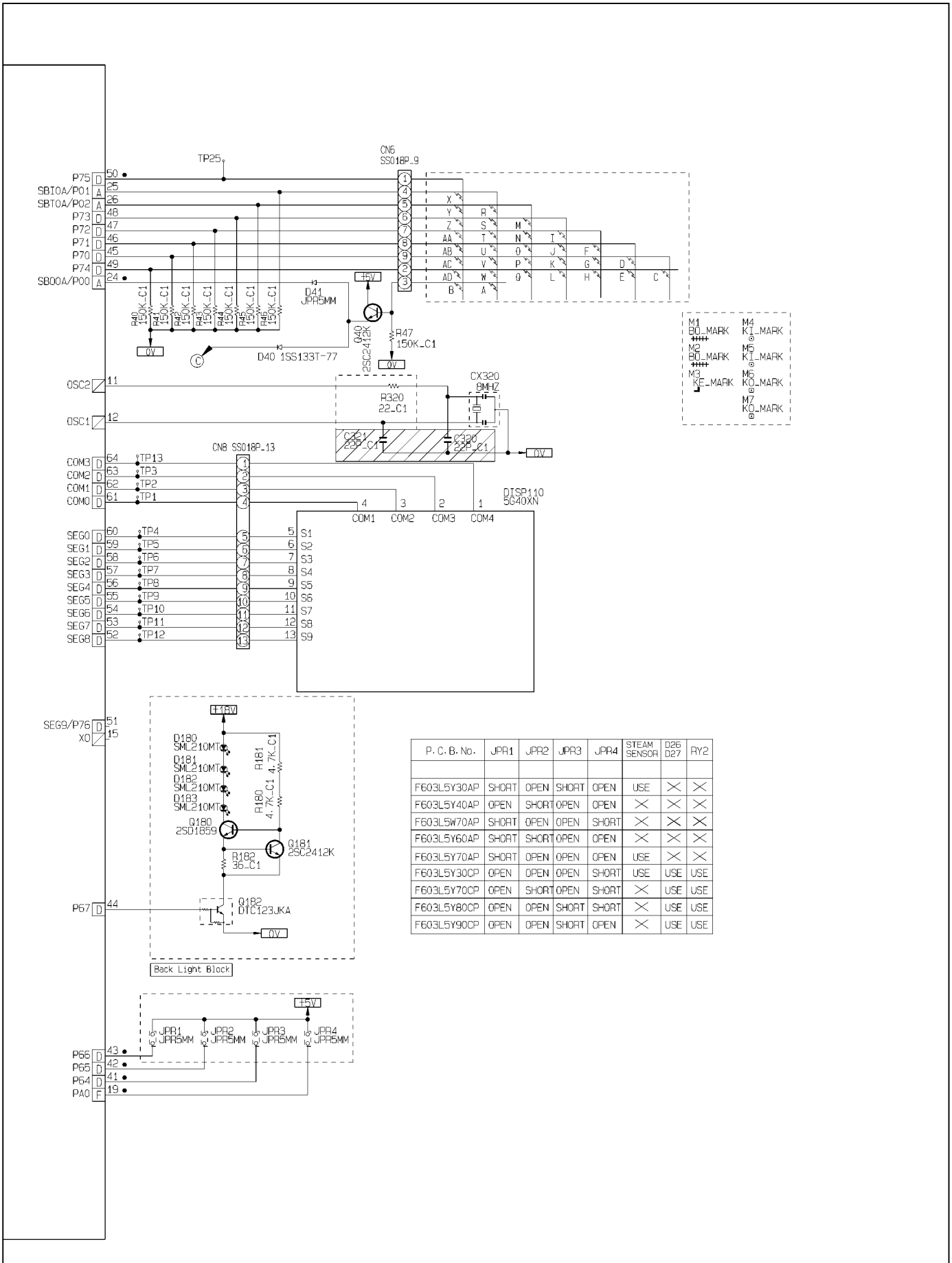



| P.C.B.No. | JPR1 | JPR2 | JPR3 | JPR4 | STEAM SENSOR | D26 D27 |
|---|---|---|---|---|---|---|
| F603L5Y20AP | OPEN | SHORT | OPEN | SHORT | USE | × |

# 14 DIGITAL PROGRAMMER CIRCUIT(NN-S*** APH/CPH)

SCHEMATIC DIAGRAM






| P. C. B. No. | JPR1 | JPR2 | JPR3 | JPR4 | STEAM SENSOR | D26 D27 | RY2 |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| F603L5Y30AP | SHORT | OPEN | SHORT | OPEN | USE | × | × |
| F603L5Y40AP | OPEN | SHORT | OPEN | OPEN | × | × | × |
| F603L5W70AP | SHORT | OPEN | OPEN | SHORT | × | × | × |
| F603L5Y60AP | SHORT | SHORT | OPEN | OPEN | × | × | × |
| F603L5Y70AP | SHORT | OPEN | OPEN | OPEN | USE | × | × |
| F603L5Y30CP | OPEN | OPEN | OPEN | SHORT | USE | USE | USE |
| F603L5Y70CP | OPEN | SHORT | OPEN | SHORT | × | USE | USE |
| F603L5Y80CP | OPEN | OPEN | SHORT | SHORT | × | USE | USE |
| F603L5Y90CP | OPEN | OPEN | SHORT | OPEN | × | USE | USE |

# 15 DIGITAL PROGRAMMER CIRCUIT

PARTS LIST

| Ref. No. | | Part No. | Part Name & Description | Pcs/Set | Remarks |
|---|---|---|---|---|---|
| BZ310 | | AEFBAT2001 | BUZZER | 1 | 2.0KHz |
| C221 | | AECUU06F103Z | CHIP CAPACITOR | 1 | 0.01µF/50V |
| C484 | | AECUU06F103Z | CHIP CAPACITOR | 1 | 0.01µF/50V (T*** APH/CPH, S563 APH/CPH, S533 APH) |
| C351 | | AECUU06C101J | CHIP CAPACITOR | 1 | 100PF/50V (S*** APH/CPH) |
| C343 | | AECUU06C101J | CHIP CAPACITOR | 1 | 100PF/50V (T*** APH/CPH) |
| C12, C440 | | AECUT06F104Z | CHIP CAPACITOR | 2 | 0.1µF/25V |
| C350 | | AECUT06F104Z | CHIP CAPACITOR | 1 | 0.1µF/25V (S*** APH/CPH) |
| C340 | | AECUT06F104Z | CHIP CAPACITOR | 1 | 0.1µF/25V (T*** APH/CPH) |
| C330 | | AECUU06R102K | CHIP CAPACITOR | 1 | 1000PF/50V |
| C481 | | AECUU06F473Z | CHIP CAPACITOR | 1 | 0.047µF/50V (T*** APH/CPH, S563 APH/CPH, S533 APH) |
| C10 | | AECETK1V471B | AL CHEM CAPACITOR | 1 | 470µF/35V |
| C482 | | AECETS1H010B | AL CHEM CAPACITOR | 1 | 1µF/50V (T*** APH/CPH, S563 APH/CPH, S533 APH) |
| C483 | | AECETS1HR47B | AL CHEM CAPACITOR | 1 | 0.47µF/50V (T*** APH/CPH, S563 APH/CPH, S533 APH) |
| C485 | | AECETS1H2R2B | AL CHEM CAPACITOR | 1 | 2.2µF/50V (T*** APH/CPH, S563 APH/CPH, S533 APH) |
| CN1 | | AEEMXH01505W | CONNECTOR | 1 | 5 Pin |
| CN2 | | AEEMMF00703W | CONNECTOR | 1 | 3 Pin (T*** APH/CPH, S563 APH/CPH, S533 APH) |
| CN3 | | F03524U50AP | CONNECTOR | 1 | 3 Pin |
| CN4 | | AEEMXH00F04W | CONNECTOR | 1 | 4 Pin |
| CN6 | | AEEM09FDZBTM | CONNECTOR | 1 | 9 Pin (T*** APH/CPH) |
| CX320 | | AEFOS800MG06 | CERAMIC RESONATOR | 1 | 8.0MHz |
| D10-D13 | | AESSRCT1A6-E | DIODE | 4 | |
| D40, D220, D221 | | AESS133T-77 | DIODE | 3 | |
| D223 | | AESS133T-77 | DIODE | 1 | (T*** APH/CPH) |
| DISP110 | | AEDDHJ4M00AP | LCD | 1 | (T583 APH/CPH) |
| DISP110 | | AEDDHJ5U20XN | LCD | 1 | (T563SF APH, T563SAF APH) |
| DISP1 HOLDER | | F66175E40XN | LCD HOLDER | 1 | (T583 APH/CPH) |
| DISP1 HOLDER | | F66174U20AP | LCD HOLDER | 1 | (T563SF APH, T563SAF APH) |
| | | F67525E40XN | DIFFUSION SHEET | 1 | (T583 APH/CPH) |
| D25 | | AERZ271KD10A | VARSITOR | 1 | |
| D26, D27 | | AERZ102KD10A | VARSITOR | 2 | CPH |
| D180-D183 | | AESQPY1112H | CHIP-LED | 4 | |
| D184-D189 | | AESQPY1112H | CHIP-LED | 6 | (T583 APH/CPH) |
| IC1 | | MN101C54CEH | L.S.I | 1 | (T583 APH/CPH) |
| IC1 | | MN101C589EB | L.S.I | 1 | (T563SF APH, T563SAF APH) |
| IC1 | | MN101C589EA | L.S.I | 1 | (S*** APH/CPH) |
| IC480 | | AEICUPC358G2 | IC | 1 | (T583 APH/CPH, S563 APH/CPH, S533 APH) |
| Q226 | | AESA14EKE | CHIP DIGI-TRANSISTOR | 1 | |
| Q182 | | AESC23JKE | CHIP DIGI-TRANSISTOR | 1 | |
| Q210 | | AESC23JKE | CHIP DIGI-TRANSISTOR | 1 | (S*** APH/CPH) |
| Q223, Q224 | | AESC23JKE | CHIP DIGI-TRANSISTOR | 2 | (T*** APH/CPH) |
| Q11, Q180 | | 2SD1859TV2Q | TRANSISTOR | 2 | |
| Q181, Q220, Q225 | | 2SC2412KT146 | CHIP TRANSISTOR | 3 | |
| Q40 | | 2SC2412KT146 | CHIP TRANSISTOR | 1 | (S*** APH/CPH) |
| R182, R183 | | AERJ06J101R | CHIP RESISTOR | 2 | 1K, 1/16W, 5% (T583 APH/CPH) |
| R211 | | AERJ06J102R | CHIP RESISTOR | 1 | 1K, 1/16W, 5% (S***APH/CPH) |
| R226 | | AERJ06J103R | CHIP RESISTOR | 1 | 10K, 1/16W, 5% (T563SF APH, T563SAF APH, S*** APH/CPH) |
| R224 | | AERJ06J103R | CHIP RESISTOR | 1 | 10K, 1/16W, 5% (T583 APH/CPH) |
| R490, R492 | | AERJ06J103R | CHIP RESISTOR | 2 | 10K, 1/16W, 5% (T583 APH/CPH, S563 APH/CPH, S533 APH) |
| R221, R228 | | AERJ06J104R | CHIP RESISTOR | 2 | 100K, 1/16W, 5% |
| R229, R350, R351 | | AERJ06J104R | CHIP RESISTOR | 3 | 100K, 1/16W, 5% (S*** APH/CPH) |
| R342, R343 | | AERJ06J104R | CHIP RESISTOR | 2 | 100K, 1/16W, 5% (T*** APH/CPH) |
| R483, R484, R489 | | AERJ06J105R | CHIP RESISTOR | 3 | 1M, 1/16W, 5% (T*** APH/CPH, S563 APH/CPH, S533 APH) |
| R40-R47 | | AERJ06J154R | CHIP RESISTOR | 8 | 150K, 1/16W, 5% (S*** APH/CPH) |
| R485 | | AERJ06J154R | CHIP RESISTOR | 1 | 150K, 1/16W, 5% (T*** APH/CPH, S563 APH/CPH, S533 APH) |
| R488, R491 | | AERJ06J202R | CHIP RESISTOR | 2 | 2K, 1/16W, 5% (T*** APH/CPH, S563 APH/CPH, S533 APH) |
| R320 | | AERJ06J220R | CHIP RESISTOR | 1 | 22Ω, 1/16W, 5% |
| R181, R227 | | AERJ06J220R | CHIP RESISTOR | 2 | 22Ω, 1/16W, 5% (T583 APH/CPH) |
| R220, R222, R223 | | AERJ06J222R | CHIP RESISTOR | 3 | 2.2K, 1/16W, 5% |
| R210 | | AERJ06J332R | CHIP RESISTOR | 1 | 3.3K, 1/16W, 5% (S*** APH/CPH) |
| R310 | | AERJ06J332R | CHIP RESISTOR | 1 | 3.3K, 1/16W, 5% (T*** APH/CPH) |
| R330 | | AERJ06J333R | CHIP RESISTOR | 1 | 33K, 1/16W, 5% |
| R182 | | AERJ06J360R | CHIP RESISTOR | 1 | 36Ω, 1/16W, 5% (S*** APH/CPH) |

| Ref. No. | | Part No. | Part Name & Description | Pcs/Set | Remarks |
|---|---|---|---|---|---|
| R487 | | AERJ06J433R | CHIP RESISTOR | 1 | 43K, 1/16W, 5% (T*** APH/CPH, S563 APH/CPH, S533 APH) |
| R331, R441 | | AERJ06J471R | CHIP RESISTOR | 2 | 470Ω, 1/16W, 5% |
| R554 | | AERJ06J471R | CHIP RESISTOR | 1 | 470Ω, 1/16W, 5% (S*** APH/CPH) |
| R341 | | AERJ06J471R | CHIP RESISTOR | 1 | 470Ω, 1/16W, 5% (T*** APH/CPH) |
| R14, R15, R180, R181, R352 | | AERJ06J472R | CHIP RESISTOR | 5 | 4.7K, 1/16W, 5% (S*** APH/CPH) |
| R480, R481 | | AERJ06J472R | CHIP RESISTOR | 2 | 4.7K, 1/16W, 5% (T*** APH/CPH, S563 APH/CPH, S533 APH) |
| R360 | | AERJ06J472R | CHIP RESISTOR | 1 | 4.7K, 1/16W, 5% (T*** APH/CPH) |
| R553 | | AERJ06J473R | CHIP RESISTOR | 1 | 47K, 1/16W, 5% (S*** APH/CPH) |
| R340 | | AERJ06J473R | CHIP RESISTOR | 1 | 47K, 1/16W, 5% (T*** APH/CPH) |
| R440 | | AERJ06J512R | CHIP RESISTOR | 1 | 5.1K, 1/16W, 5% |
| R486 | | AERJ06J684R | CHIP RESISTOR | 1 | 680K, 1/16W, 5% (T*** APH/CPH, S563 APH/CPH, S533 APH) |
| R10, R11 | | AERDY2TJ102T | CARBON RESISTOR | 2 | 1K, 1/4W, 5% |
| R290 | | AERDY2TJ103T | CARBON RESISTOR | 1 | 10K, 1/4W, 5% (S*** APH/CPH) |
| R12, R180 | | AERDY2TJ103T | CARBON RESISTOR | 2 | 10K, 1/4W, 5% (T*** APH/CPH) |
| R290 | | AERDY2TJ104T | CARBON RESISTOR | 1 | 100K, 1/4W, 5% (T*** APH/CPH) |
| VZ1 | | AEVNNV6TL103 | VARISTOR | 1 | 10KΩ (S*** APH/CPH) |
| VZ340 | | AEVNNV6TL103 | VARISTOR | 1 | 10KΩ (T*** APH/CPH) |
| RY1 | | AEGG5G1A18 | POWER RELAY | 1 | |
| RY2 | | AEBJQ1A18 | POWER RELAY | 1 | (CPH, T*** APH/CPH) |
| T10 | | AETP284U0AP | LOW VOLTAGE TRANSFORMER | 1 | |
| ZD10 | | AESZMTZJ5R6B | ZENER DIODE | 1 | (T*** APH/CPH) |
| ZD11 | | AESZMTZJ5R6B | ZENER DIODE | 1 | (S*** APH/CPH) |

01/03
S-5V5, S-5W7
S-5Y0, S-5Y2
S-5Y3, S-5Y4
S-5Y6, S-5Y7
S-5Y8, S-5Y9
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